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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/364,241 | 07/29/1999 | ROBERT P. PARKER | 02103/349001 | 9138 |

26161 7590 04/04/2003

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BOSTON, MA 02110

EXAMINER

TRAN, KHANH C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2631

DATE MAILED: 04/04/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/364,241

Applicant(s)

ROBERT P. PARKER

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Response B filed 01/14/2003 have been entered. Claims 1-15 are pending in this Office action.

Response to Arguments

2. Applicant's arguments filed on 01/14/2003 have been fully considered but they are not persuasive. Below is the Examiner's response to address all issues stated in Applicant's arguments:

Regarding claim 1, referring to figure 1 of Ikeguchi invention, frequency comparator 22 in the correcting circuit 18 compares the frequency of received intermediate frequency (IF) signal with the frequency of a reference oscillation frequency signal generated by a reference oscillator 20. The reference oscillation frequencies correspond to a plurality of digital data representations of the channels to be preset in the preset circuit 7. The above teaching addresses the claimed limitation "comparing the frequency of ...". Each preset channel would inherently have a small frequency range wherein center frequency of that range represents a desired broadcast station. Referring back to the correcting circuit 18, if the received IF frequency is different from the reference frequency; an error signal is produced from the frequency comparator 22 and is applied to the digital-analog (DAC) converting circuit. The analog converted signal from the converting circuit 11 is corrected and is applied to the voltage

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controlled oscillator 6 to tune the received IF frequency within the range of reception frequencies. The teaching portion clearly addresses the step of "tuning the oscillator of the receiver ..." as stated in said claim.

Regarding claim 2, claim 1 recites the steps of "comparing the frequency..." and "tuning the oscillator of the receiver" of said claim. As stated in previous Office action, the preset circuit 7 in figure 1 includes a storage circuit 10 comprising a channel selecting switch 9, a memory 8 for storing a plurality of digital data representations representative of the local oscillation frequencies corresponding to the channels to be preset. As known in the art, the channels must be indexed to distinguish from one channel to the others. The digital data representations are converted to an analog control signal through the DAC 11 to tune the VCO 6 to a frequency within the range of reception frequencies of a desired channel. Hence, the received signal frequency is indirectly being indexed by tuning to the range of reception frequencies of a desired channel.

Regarding claim 3, claim 1 recites the steps of "comparing the frequency..." and "tuning the oscillator of the receiver" of said claim. As recited in claim 1, the reference oscillation frequencies, generated by the reference oscillator, correspond to a plurality of digital data representations of the channels to be preset in the preset circuit 7. The preset channels are indexed to distinguish from one channel to the others as known in the art. Therefore, the reference oscillation frequencies are inherently indexed to different values.

Regarding claim 8, claim 1 recites the steps of "comparing the frequency..." and "tuning the oscillator of the receiver" of said claim. As well known in the art, each channel comprises a small range of frequencies wherein the center frequency is equal to $F_{low} + (F_{high} - F_{low})/2$ respectively. Since the reference oscillation frequency corresponds to the digital data representation of the channel to be preset in the preset circuit 7, the reference oscillation frequency is inherently approximate to $F_{low} + (F_{high} - F_{low})/2$.

Regarding claim 9, claim 1 recites the steps of "comparing the frequency..." and "tuning the oscillator of the receiver" of said claim. Ikeguchi teachings apply to both AM and FM tuners. Therefore, the range of frequencies stated in said claim can be easily preset in the preset circuit 7. Furthermore, the mere selection of frequency range that is not an inventive feature could not be patentable since the preset tuner could be tuned to any range of frequencies at design.

Regarding figure 10, referring to figure 1 again, a receiver includes a VCO 6, a preset tuner 7 that stores digital data representations representative of the local oscillation frequencies corresponding to the channels to be preset, a voltage correcting circuit for providing a frequency control signal to the VCO 6 through the DAC 11.

Regarding claim 11, the rejection argument of said claim is similar to the rejection in claim 10. Furthermore, the receiver in figure 1 includes an receiving antenna 1 and a mixer 3 for converting received high frequency signal into an IF signal.

Regarding claim 12, the rejection argument still stands and has been stated in previous Office action in combination of Ikeguchi and Saito teachings since both

invention teaches similar method of tuning a local VCO of a receiver to a frequency within the range of reception frequencies. As stated before and repeated again, utilizing a PLL to lock on to a desired frequency is notoriously known in the art and it would have been obviously strong to modify Ikeguchi teaching to include a PLL as taught by Saito.

Regarding claim 13, the rejection argument of said claim is similar to claim 11. Furthermore, the claimed frequency range can be preset in the preset circuit 7 at design choice.

Regarding claim 14, since said claim used to depend on claim 11 has been rewritten in independent form, the rejection argument of said claim is similar to claim 11. Furthermore, the claimed limitation "the frequency controller further comprises a microprocessor" has been rejected in previous Office action using a combination of Ikeguchi and Koyama teachings.

Regarding to dependent claims 4-7 and 15, said claims have been rejected in previous Office action and the rejection still stands in this Office action.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on *Tuesday - Friday from 08:00 AM - 05:00 PM*.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

KCT
March 27, 2003

TESTALLET SECURE
PRIMAVERA CHINER

